



Adapting to Climate Change: San Francisco Bay and the Shoreline



San Francisco Bay Conservation and
Development Commission







Chronicle / Susanna Frohman

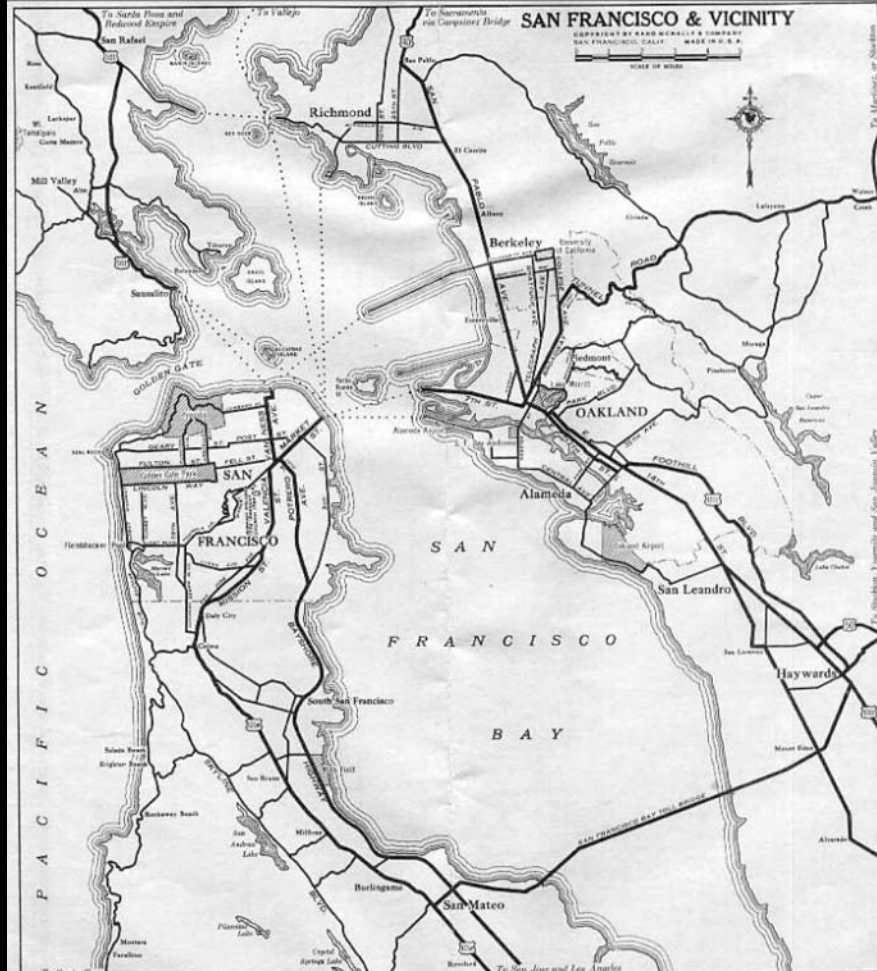


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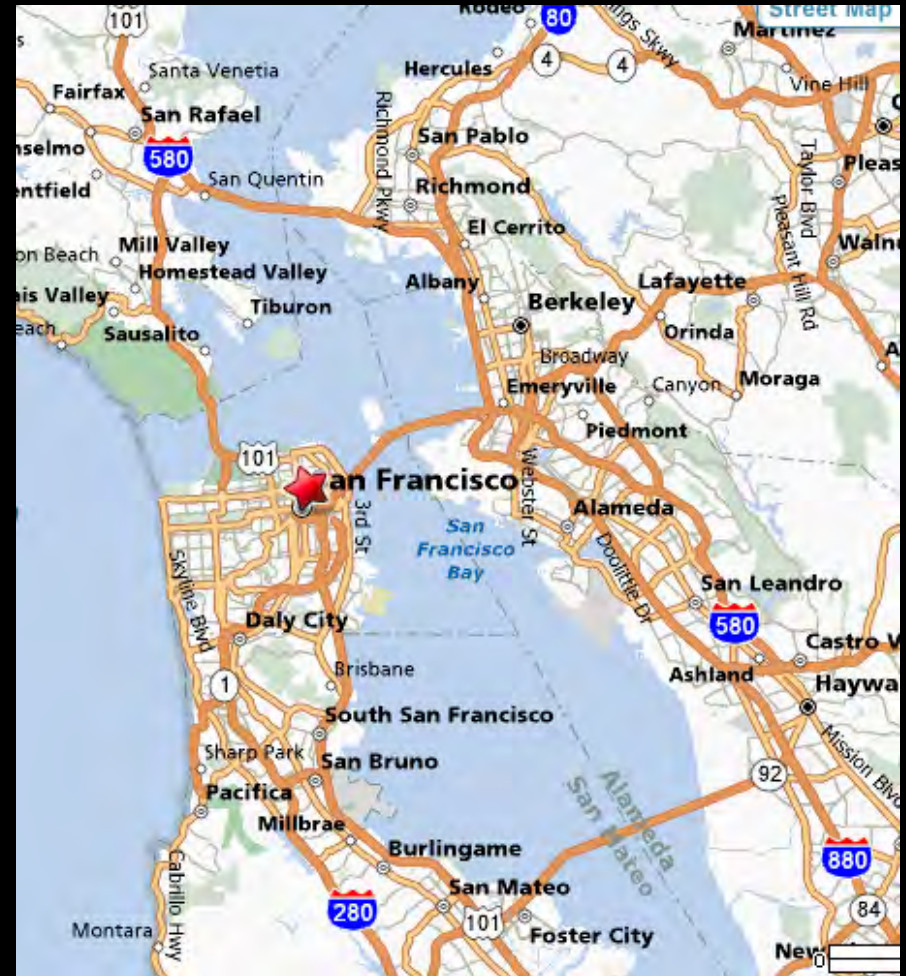


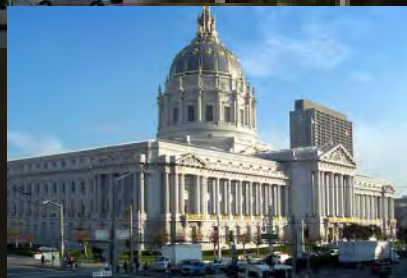
San Francisco Bay Area Highways

1933



2008









Definitions

- **Vulnerability:** The extent to which a natural or social system is susceptible to the adverse effects of climate change, climate variability and extremes.
- **Resilience:** The ability of a system to absorb and rebound from the impacts from weather extremes, climate variability, or change and to continue functioning (Luers and Moser).

Definitions

- **Mitigation:** Actions that reduce the emission of greenhouse gases into the atmosphere or enhance their sequestration and thereby reduce the probability of reaching a given level of climate change.
- **Adaptation:** Actions in response to potential or experienced impacts of climate change that lead to a reduction in risks or a realization of benefits.

Definitions

- **Adaptive Capacity:** The ability of a system to adjust or respond to climate change, climate variability and extremes, to accomplish the following: (1) moderate potential damages; (2) take advantage of new opportunities arising from climate change; or (3) accommodate the impacts.

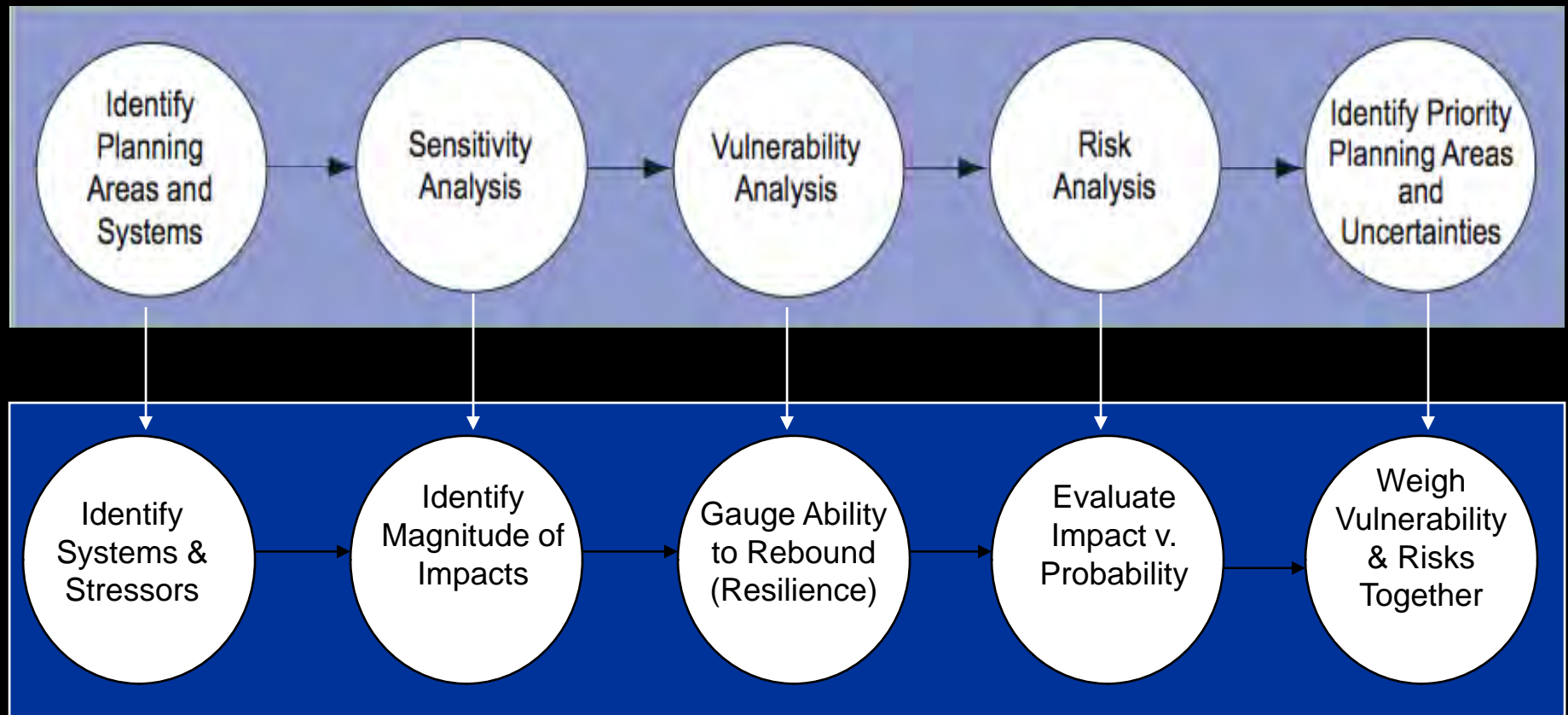


Coastal Resilience v Adaptive Capacity





Steps in a Vulnerability Analysis





Adaptation Challenges for Coastal Managers

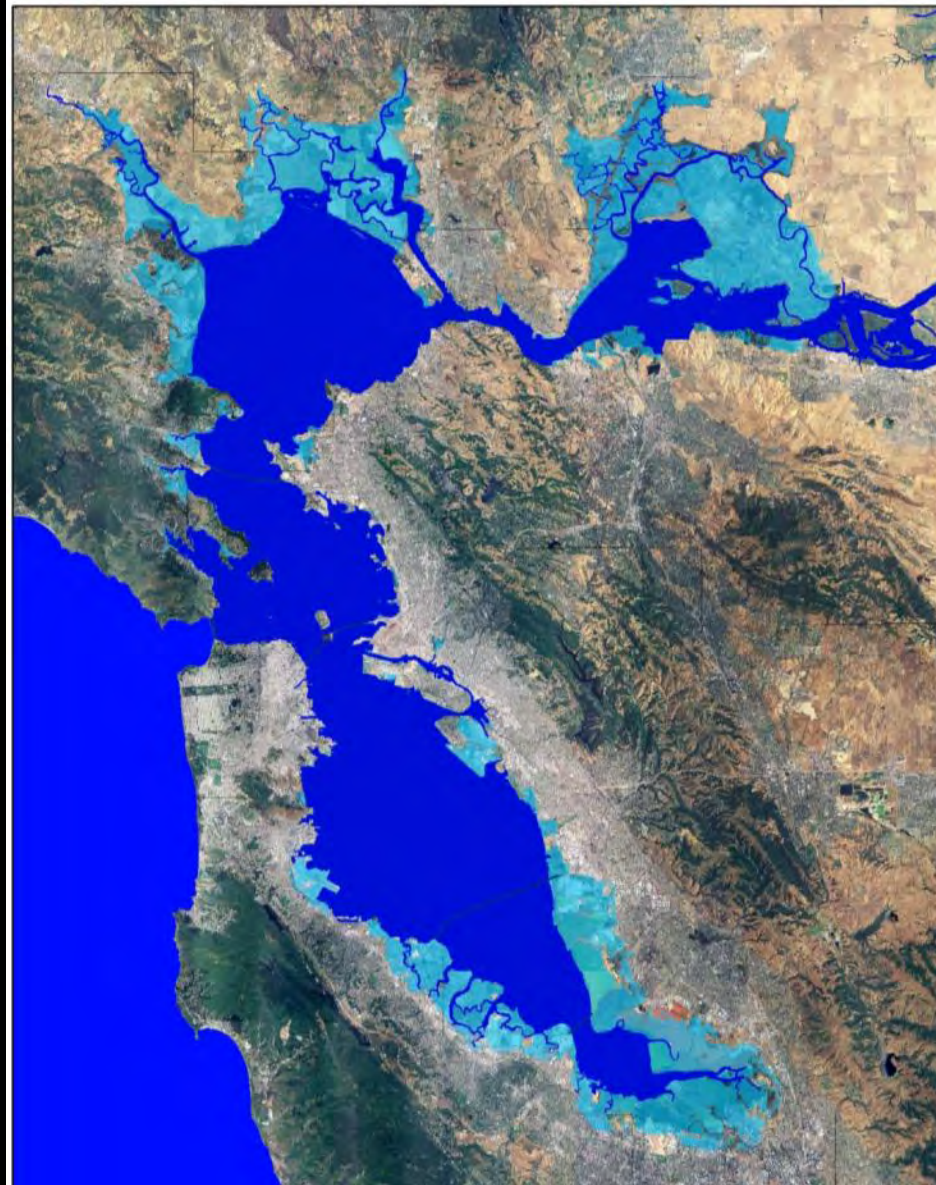
- Interpreting agency jurisdictions when the shoreline is continuously moving.
- Reconciling watershed management and multiple jurisdictional boundaries.
- Accommodating adaptive management and planning for more rigorous monitoring.



Research Needs

- Different scales of research
- Integration of research
- Dissemination of research

Regionwide Analysis

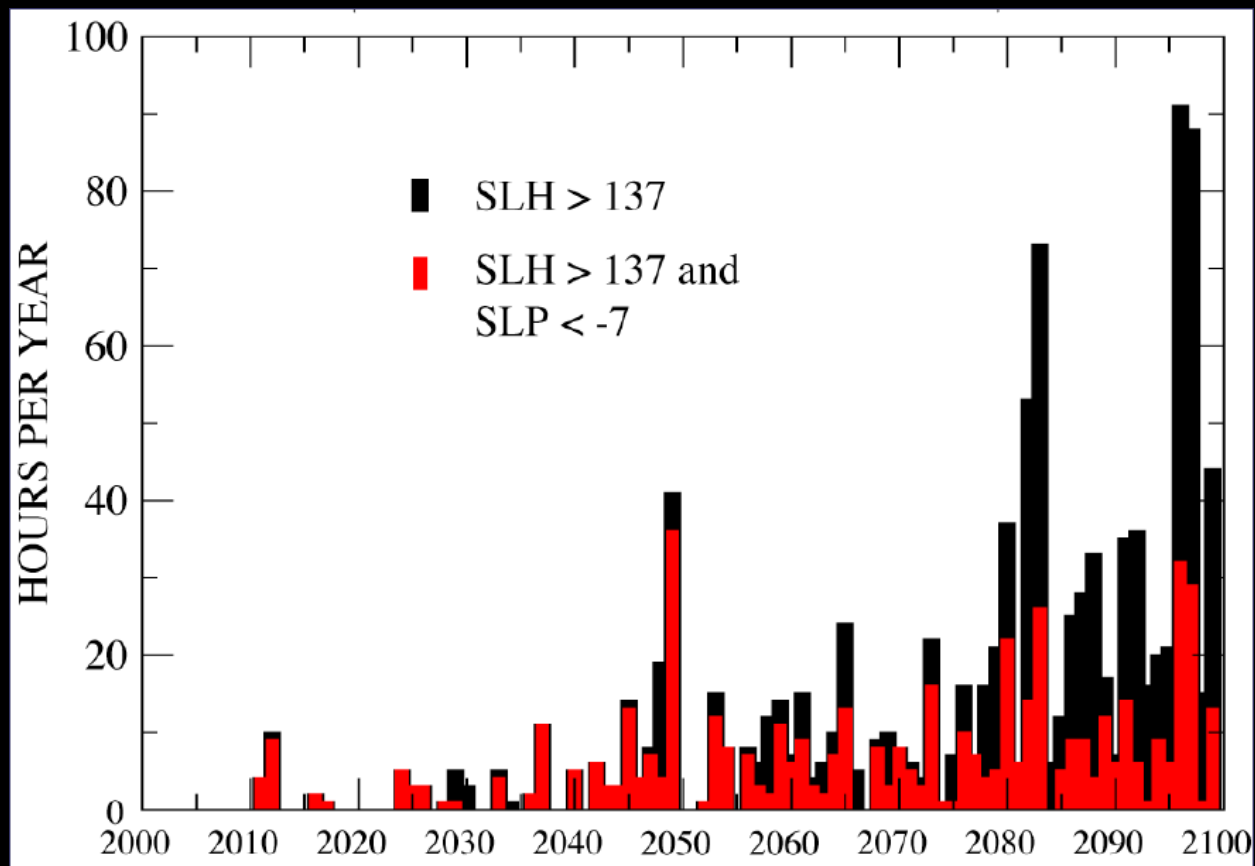




Local Pilot Studies



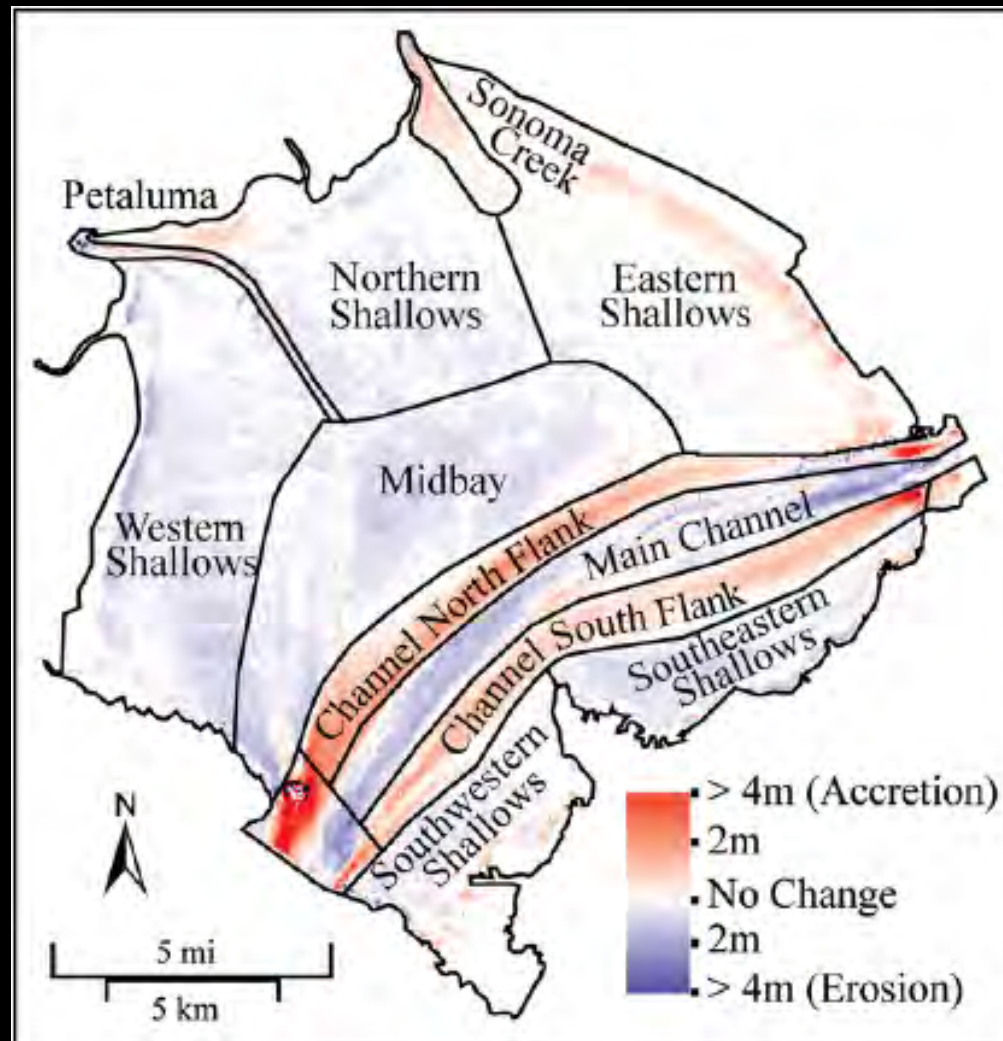
Projections of Future



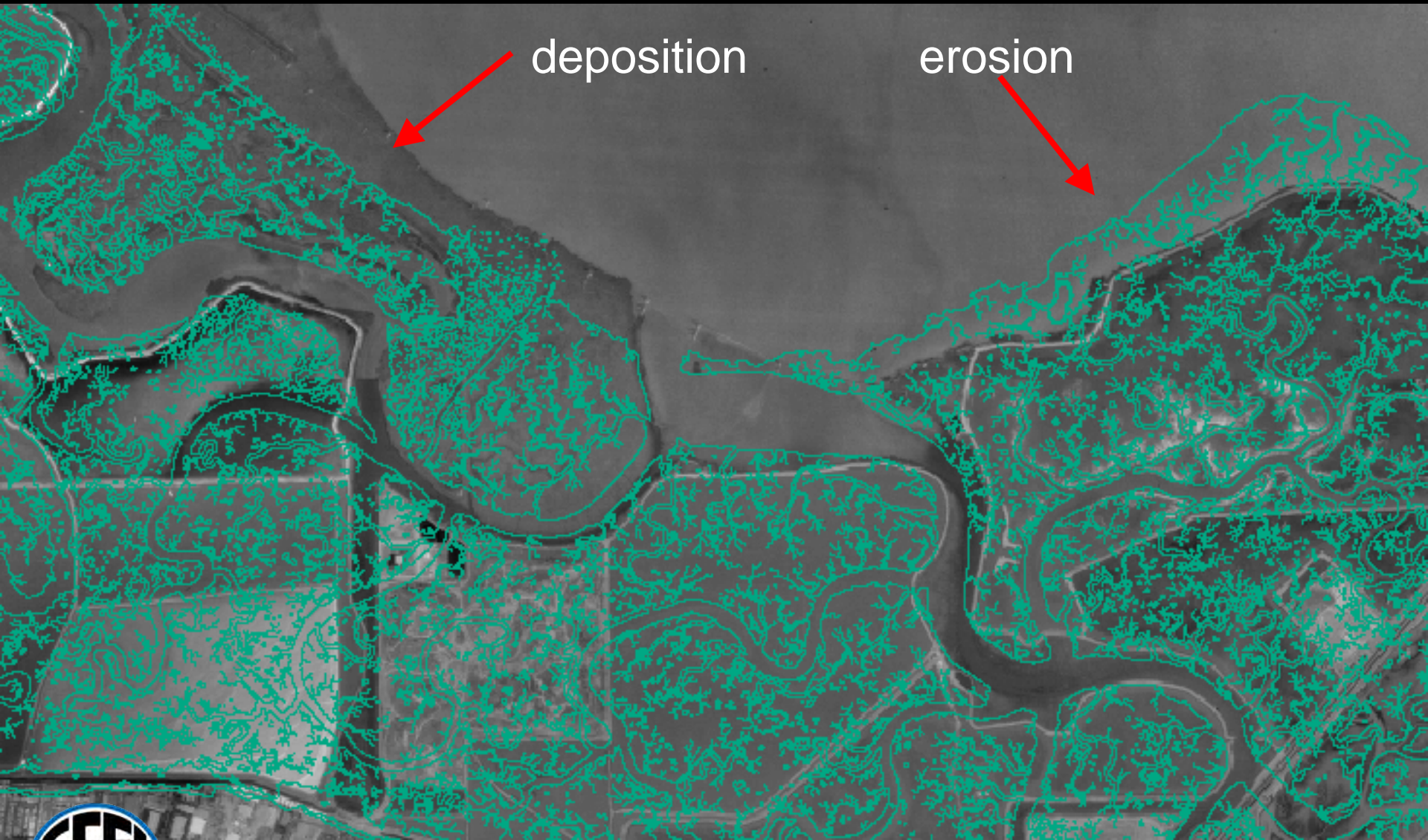
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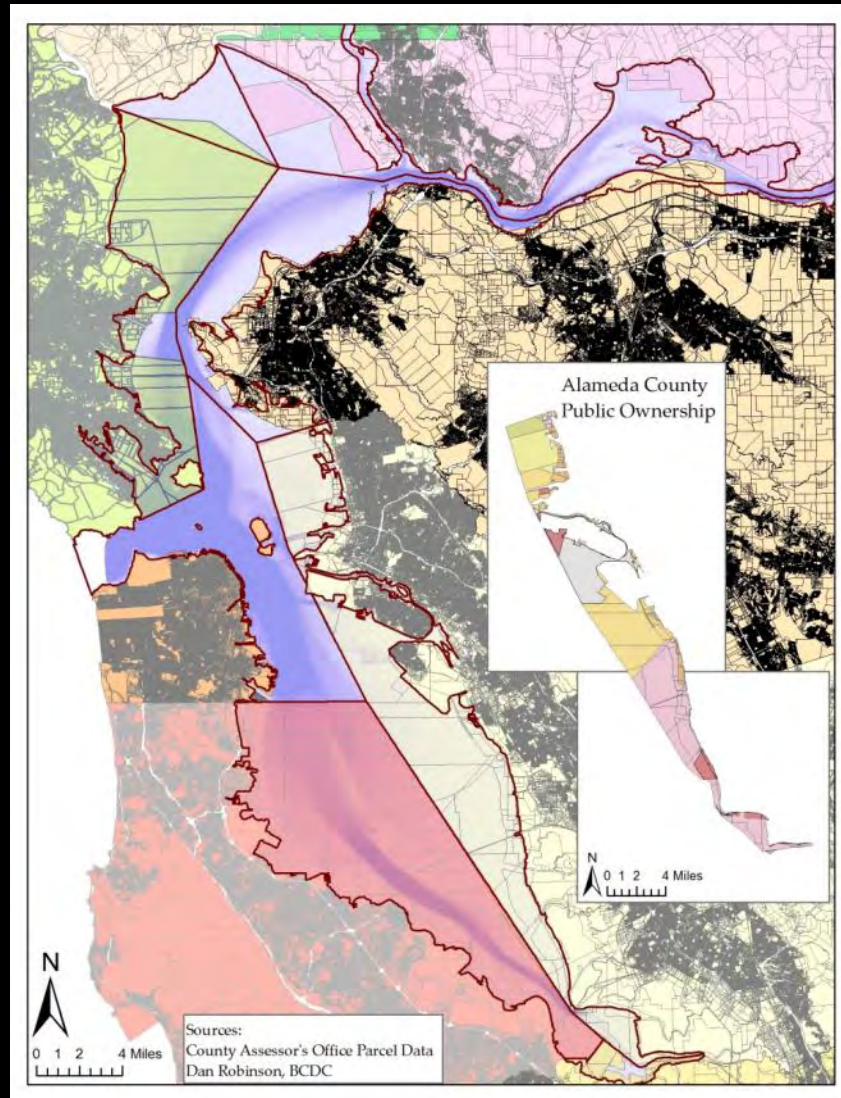
Monitoring the Present



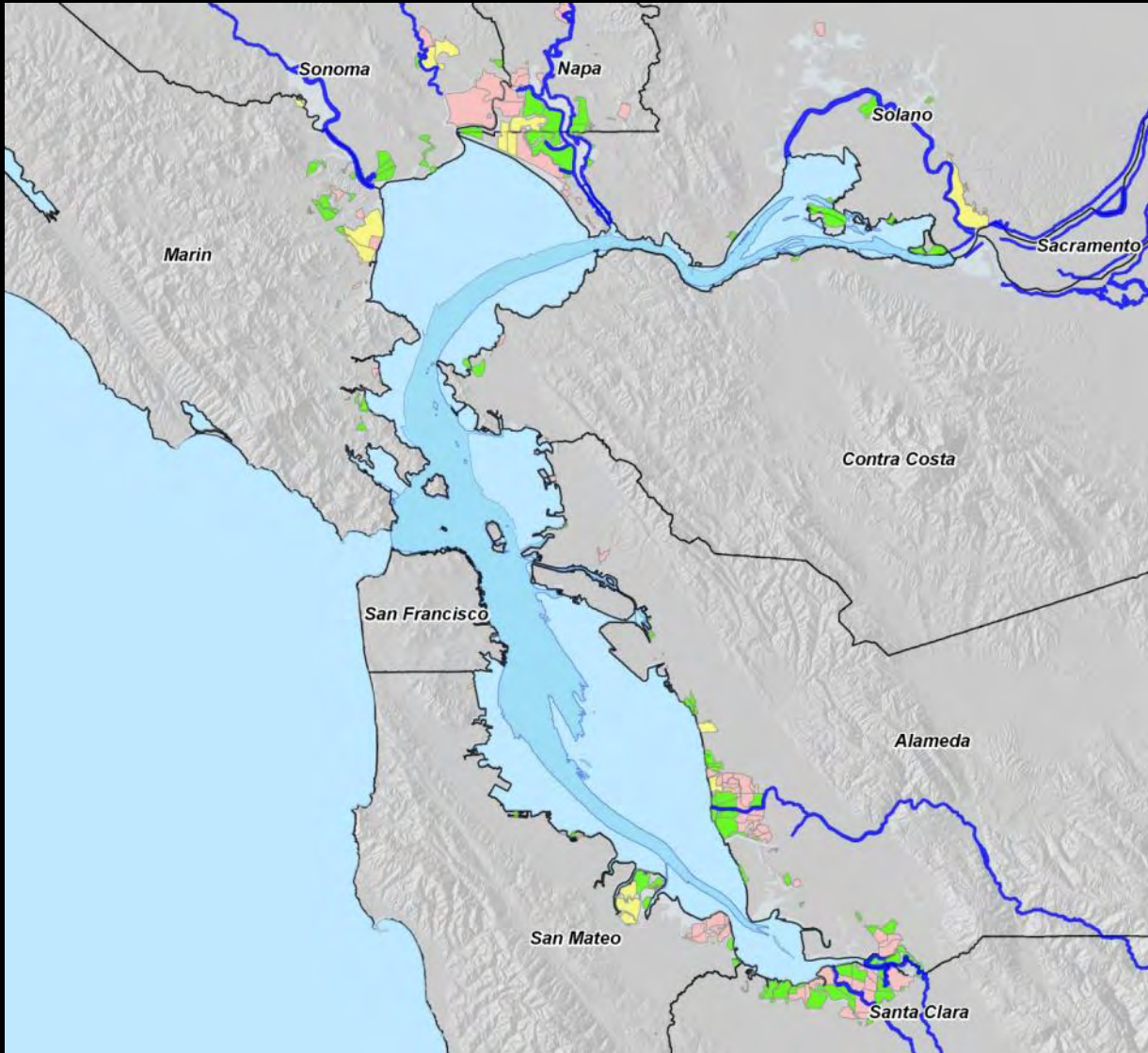
Lessons of the Past



Property Boundaries



Ecosystem Boundaries



Dissemination of Research

- Easily accessible - Web-based tools
- Easily interpretable formats
- Information sharing – GIS, etc.



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